

22. (New) The apparatus of claim 21, wherein said housing is configured to receive an irradiated nuclear fuel assembly comprising an array of cylindrical rods.

23. (New) The apparatus of claim 21, wherein said housing further comprises a base plate to secure said housing to a floor of a fuel pool.

24. (New) The apparatus of claim 21, wherein said housing comprises an elongated structure and wherein said plurality of ultrasonic transducers is positioned along an entire length of said elongated structure.

25. (New) The apparatus of claim 21, wherein each of said ultrasonic transducers comprises an elongated rod having a first end and a second end; a first transducer at said first end; and a second transducer at said second end;

wherein said housing comprises an elongated structure that extends in a predetermined direction; and

wherein each of said elongated rods is positioned substantially parallel to said predetermined direction.

26. (New) The apparatus of claim 25, wherein said plurality of ultrasonic transducers is positioned along an entire length of said elongated structure.

27. (New) The apparatus of claim 21, wherein said housing comprises an elongated, rectangular structure having four sides and wherein said plurality of ultrasonic transducers is positioned on each of said four sides.

28. (New) The apparatus of claim 27 wherein each of said ultrasonic transducers comprises an elongated rod having a first end and a second end; a first transducer at said first end; and a second transducer at said second end; and wherein each of said elongated rods is positioned substantially parallel to a direction of elongation of said elongated, rectangular structure.